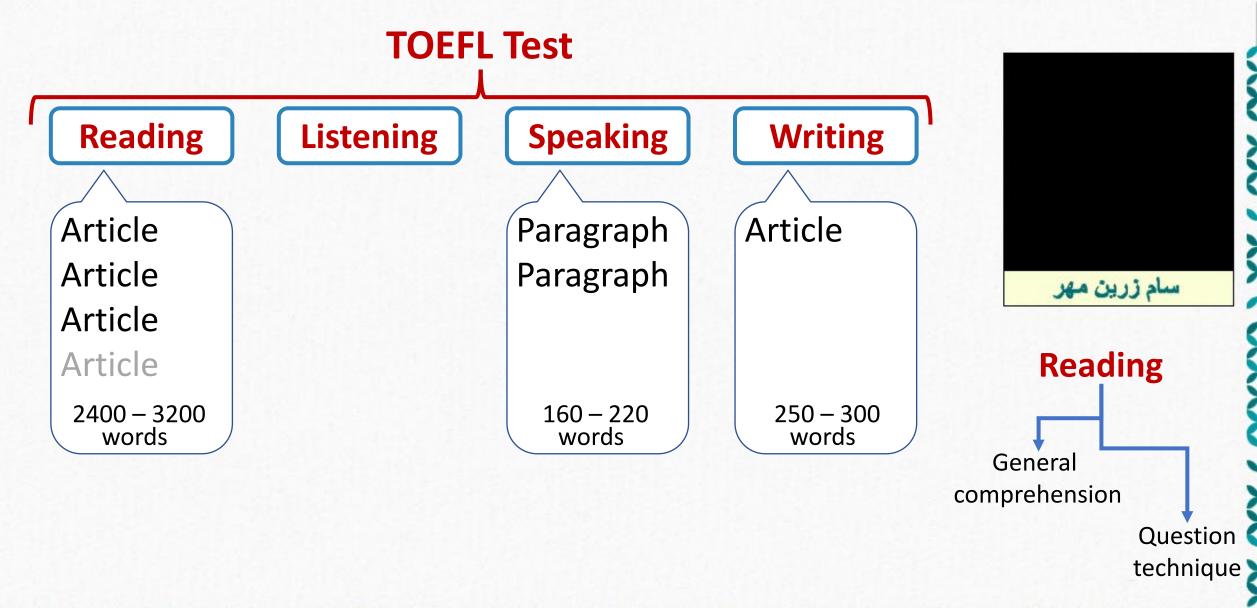
How to approach the reading section?



How to approach the reading section?

Reading

Article

Article

Article

Article

2400 - 3200

words

When the Hawaiian Islands emerged from the sea as volcanoes, starting about five million years ago they were far removed from other landmasses. Then, as blazing sunshine alternated with drenching rains, the harsh, barren surfaces of the black rocks slowly began to soften. Winds brought a variety of life-forms.

Spores light enough to float on the breezes were carried thousands of miles from more ancient lands and deposited at random across the bare mountain flanks. A few of these spores found a toehold on the dark forbidding rocks and grew and began to work their transformation upon the land. Lichens were probably the first successful flora. These are not single individual plants; each one is a symbiotic combination of ar alga and a fungus. The algae capture the Sun's energy by photosynthesis and store it in organic molecule age and a rungos. The age capture one surs series of your photosynthesis and subject in by again more The fungi absorb moisture and mineral salts from the rocks, passing these on in waste products that nourish algae. It is significant that the earliest living things that built communities on these islands are examples of symbiosis, a phenomenon that depends upon the close cooperation of two or more forms of life and a principle that is very important in island con

Lichens helped to speed the decomposition of the hard rock surfaces, preparing a soft bed of soil that was abundantly supplied with minerals that had been carried in the molten rock from the howels of Farth additionality supplies with numeral that had been carried in the indicent occurring the most and the base of cardin. Now, other forms of life could take holds (Ferns and mosses (two of the most ancient types of land plants) that flourish' even in rock crevices. **a**These plants propagate by producing spores — tiny fertilized cells that ontain all the instructions for making a new plant — but the spores are unprotected by any outer coating and carry no supply of nutrient. Vast numbers of them fall on the ground beneath the mother Sometimes they are earned farther afield by water or by wind. But only those few spores the down in very favorable locations can start new life: the vast majority fall on barren ground. By sheer numbers, however, the mosses and ferns reached Hawaii, survived, and multiplied. So developed great size, becoming tree ferns that even now grow in the Hawaiian forests.

Many millions of years after ferns evolved (but long before the Hawaiian Islands were born f another kind of flora evolved on Earth: the seed-bearing plants. This was a wonderful biologic The seed has an outer coating that surrounds the genetic material of the new plant, and insid covering is a concentrated supply of nutrients. Thus, the seed's chances of survival are greatly over those of the naked spore. One type of seed-bearing plant, the angiosperm, includes all fe blooming vegetation. In the angiosperm the seeds are wrapped in an additional layer of cover these coats are hard- like the shell of a nut- for extra protection. Some are soft and tempti peach or a cherry. In some angiosperms the seeds are equipped with gossamer wings, like the d and milkweed seeds. These new characteristics offered better ways for the seeds to move to ne They could travel through the air, float in water, and lie dormant for many months.

Plants with large, huovant seeds-like coconuts-drift on ocean currents and are washed up Plants with large, budyant seeds – like Coconds – unit on occan charlens and are washed up or shores. Remarkably resistant to the vicissitudes of occan travel, they can survive prolonged imm saltwater. When they come to rest on warm beaches and the conditions are favorable, the seed soften Nourished by their imported supply of nutrients, the young plants push out their roots blish their place in the su

By means of these seeds, plants spread more widely to new locations, even to isolated islan Hawaiian archipelago, which lies more than 2,000 miles west of California and 3,500 miles eas seeds of grasses, flowers, and blooming trees made the long trips to these islands (Grasses are forms of angiosperms that bear their encapsulated seeds on long stalks.) In a surprisingly short anniocoarms filled many of the land areas on Hawaii that had been har

18 minutes **10 questions**



architectural items such as roof tiles, and modeled objects and figures. In addition, there was group of sculptures made for religious use, the majority of which were produced in earthe The earliest ceramics were fired to earthenware temperatures, but as early as the fifteenth of high-temperature stoneware were being made with glazed surfaces. During the Six Dynasties (A.D.265-539), kilns in north China were producing high-fired ceramics of good quality. White produced in Hebei and Henan provinces from the seventh to the tenth centuries evolved into the seventh of the seventh o

prized porcelains of the Song dynasty (A.D. 960-1279), long regarded as one of the high points history of China's ceramic industry. The tradition of religious sculpture extends over most hist but is less clearly delineated than that of stoneware or porcelains, for it embraces the old cus our the exacts any distinguishing of the second sec of slip., as well as the many burial ceramics produced in imitation of vessels made in material

considerable amount of the observed variability in the period Trade between the West and the settled and prosperous Chinese dynasties introduced new f centuries, but that they cannot be invoked to explain the ra different technologies. One of the most far-reaching examples is the impact of the fine ninth-the method of their manufacture.
From the Middle East the Chinese acquired a blue pigment form of cobalt oxide unobtainable at that time in China—that contained only a low level of manganese. Cobalt ores found in China have a high manganese content, which produces a more muted blue-gray color. In the seventeenth century, the trading activities of the Dutch East India Company resulted in vast quantities of decorated Chinese porcelain being brought to Europe, which stimulated and influenced the work of a wide variety of wares, notably Delft.

The Chinese themselves adapted many specific vessel forms from the West, such as bottles with long spouts, and designed a range of decorative patterns especially for the European marke

Just as painted designs on Greek pots may seem today to be purely decorative, whereas in fact they were carefully and precisely worked out so that at the time, their meaning was clear, so it is with Chinese pots. To twentieth-century eyes, Chinese pottery may appear merely decorative, yet to the Chinese the form of each object and its adornment had meaning and significance. The dragon represented the emperor, and the phoenix, the empress; the pomegranate indicated fertility, and a pair of fish, happiness; mandarii the process in explored, including the processing of the procesing of the processing of the processing of the processing

From early times pots were used in both religious and secular contexts. The imperial court commissioned work and in the Yuan dynasty (A.D. 1279-1368) an imperial ceramic factory was establish at Jingdezhen. Pots played an important part in some religious ceremonies. Long and often lyrical descriptions of the different types of ware exist that assist in classifying pots, although these some large and complicated picture

> **18 minutes 10 questions**

18 minutes 10 questions

One of the most difficult aspects of deciding whether current climatic events reveal evidence of the impact of human activities is that it is hard to get a measure of what constitutes the natural variability of the climate. We know that over the past millennia the climate has undergone major changes without any significant human intervention. We also know that the global climate system is immensely complicated and that everything is in some way connected, and so the system is capable of fluctuating in unexpected way. We need therefore to know how much the climate can vary of its own accord in order to interpret with confidence the extent to which recent changes are natural as opposed to being the result of human activities: instrumental records do not go back far enough to provide us with reliable measurements of global climatic variability on timescales longer than a century. What we do know is that as we include longer time intervals the record shows increasing evidence of slow swings in climate between differen regimes. To build up a better picture of fluctuations appreciably further back in time requires us to use

Over long periods of time, substances whose physical and chemical properties change with the ambien climate at the time can be deposited in a systematic way to provide a continuous record of changes in those properties over time, sometimes for hundreds or thousands of years. Generally, the layering occur on an annual basis hence the observed changes in the records can be dated. Information on temperature rainfall, and other aspects of the climate that can be inferred from the systematic changes in properties is sually referred to as proxy data. Proxy temperature records have been reconstructed from ice core drilled out of the central Greenland ice cap, calcite shells embedded in layered lake sediments in Western Europe, ocean floor sediment cores from the tropical Atlantic Ocean, ice cores from Peruvian glaciers, and ice cores from eastern Antarctica. While these records pro temperature variations can occur on a global scale, there an

extent of ice and snow. Also included will be any variations activity, and, possibly, human activities. One way to estima

climate variability will combine is by using computer model

considerably smaller than in data obtained from the proxy

In addition to the internal variability of the global climate sy influences, such as volcanoes and solar activity.
There is a

physical variations have a measurable impact on the clima our deliberations. Some current analyses conclude that

When the Hawaiian Islands emerged from the sea as volcanoes, starting about five million years ago the were far removed from other landmasses. Then, as blazing sunshine alternated with drenching rains, the harsh, barren surfaces of the black rocks slowly began to soften. Winds brought a variety of life-forms Spores light enough to float on the breezes were carried thousands of miles from more ancient lands an of the climate in the past 10,000 years (the Holocene perio deposited at random across the bare mountain flanks. A few of these spores found a toehold on the dark climate from these records can provide a measure of its tru the natural causes of climate change have combined. These forbidding rocks and grew and began to work their

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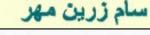
> lichens helped to speed the decomposition of the hard rock surfaces, preparing a soft bed of soil that was abundantly supplied with minerals that had been carried in the molten rock form the bowels of Earth. Now, other forms of life could take hold: ferns and mosses (two of the most ancient types of land plants) that flourish' even in rock crevices. These plants propagate by producing spores — tiny fertilized cells that contain all the instructions for making a new plant — but the spores are unprotected by any outer coating and carry no supply of nutrient. Wast numbers of them fall on the ground beneatith the mother plants. Sometimes they are earned farther afield by water or by wind. But only those few spores that settle down in very favorable locations can start new life; the vast majority fall on barren ground. By force of sheer numbers, however, the mosses and ferns reached Hawaii, survived, and multiplied. Some species developed great size, becoming tree ferns that even now grow in the Hawaiian fore

Many millions of years after ferns evolved (but long before the Hawaiian Islands were born from the sea) another kind of flora evolved on Earth: the seed-bearing plants. This was a wonderful biological inventior The seed has an outer coating that surrounds the genetic material of the new plant, and inside this covering is a concentrated supply of nutrients. Thus, the seed's chances of survival are greatly enhanced over those of the naked spore. One type of seed-bearing plant, the angiosperm, includes all forms of blooming vegetation. In the angiosperm the seeds are wrapped in an additional layer of covering. Some of blooming vegetation: in the anglosperin rule seeks are wrapped in an aduntional spec to compare 2 and the these coats are hard—like the shell of a nut- or extra protection. Some are soft and tempting, like a peach or a cherry. In some angiosperms the seeks are equipped with gossamer wings, like the dandelion and milkweek seeks. These new characteristics offered better ways for the seeks to move to new habitats. They could travel through the air, float in water, and lie dormant for many month

Plants with large, buoyant seeds-like coconuts-drift on ocean currents and are washed up on the shores. Remarkably resistant to the vicissitudes of ocean travel, they can survive prolonged immersion i saltwater. When they come to rest on warm beaches and the conditions are favorable, the seed coats soften Nourished by their imported supply of nutrients, the young plants push out their roots and establish their place in the sun. By means of these seeds, plants spread more widely to new locations, ever to isolated islands like the Hawiian archipelago, which lies more than 2,000 miles west of California and 3,500 miles east of Japan The seeds of grasses, flowers, and blooming trees made the long trips to these islands (Grasses are simple forms of angiosperms that bear their encapsulated seeds on long stalks.) In a surprisingly short time, angiosperms filled many of the land areas on Hawaii that had been bar

> **18 minutes 10 questions**





Short format:

- 3 Articles
- 54 minutes
- 30 questions

Long format:

- 4 Articles
- 72 minutes
- 40 guestions

How to approach the reading section?



The word "attributed" in the passage is closest in meaning to

ac	cu	st	or	n	e	d

credited

exposed

transformed

Chinese Population Growth

Increases in population have usually been accompanied (indeed facilitated) by an increase in trade. In the Western experience, commerce provided the conditions that allowed industrialization to get started, which in turn led to growth in science, technology, industry, transport, communications, social change, and the like that we group under the broad term of "development." However, the massive increase in population that in Europe was at first <u>attributed</u> to industrialization starting in the eighteenth century occurred also and at the same period in China, even though there was no comparable industrialization.

It is estimated that the Chinese population by 1600 was close to 150 million. The transition between the Ming and Qing dynasties (the seventeenth century) may have seen a decline, but from 1741 to 1851 the annual figures rose steadily and spectacularly, perhaps beginning with 143 million and ending with 432 million. If we accept these totals, we are confronted with a situation in which the Chinese population doubled in the 50 years from 1790 to 1840. If, with greater caution, we assume lower totals in the early eighteenth century and only 400 million in 1850, we still face a startling fact: something like a doubling of the vast Chinese population in the century before Western contact, foreign trade, and industrialization could have had much effect.

To explain this sudden increase we cannot point to factors constant in Chinese society but must find conditions or a combination of factors that were newly effective in this period. Among these is the almost complete internal peace maintained under Manchu rule during the eighteenth century. There was also an increase in foreign trade through Guangzhou (southern China) and some improvement of transportation within the empire. Control of disease, like the checking of smallpox by variolation may have been important. But of most critical importance was the food supply.

Confronted with a multitude of unreliable figures, economists have compared the population records with the aggregate data for cultivated land area and grain production in the six centuries since 1368. Assuming that China's population in 1400 was about 80 million, the economist Dwight Perkins concludes that its growth to 700 million or more in the 1960s was made possible by a steady increase in the grain supply, which evidently grew five or six times between 1400 and 1800 and rose another 50 percent between 1800 and 1965. This increase of food supply was due perhaps half to the increase of cultivated area, particularly by migration and settlement in the central and western provinces, and half to greater productivity – the farmers' success in raising more crops per unit of land.

This technological advance took many forms: one was the continual introduction from the south of earlier-ripening varieties of rice, which made possible double-cropping (the production of two harvests per year from one field). New crops such as corn (maize) and sweet potatoes as well as peanuts and tobacco were introduced from the Americas. Corn, for instance, can be grown on the dry soil and marginal hill land of North China, where it is used for food, fuel, and fodder and provides something like one-seventh of the food energy available in the area. The sweet potato, growing in sandy soil and providing more food energy per unit of land than other crops, became the main food of the poor in much



VI ANANANA WA VA VA VANANANA WA VA VA VANA / AN AN

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Instrumental records do not go back far enough to provide us with reliable measurements of global climatic variability on timescales longer than a century. What we do know is that as we include longer time intervals the record shows increasing evidence of slow swings in climate between different regimes. To build up a better picture of fluctuations appreciably further back in time requires us to use proxy records.

Over long periods of time, substances whose physical and chemical properties change with the ambient climate at the time can be deposited in a systematic way to provide a continuous record of changes in those properties over time, sometimes for hundreds or thousands of years. Generally, the layering occurs on an annual basis hence the observed changes in the records can be dated.



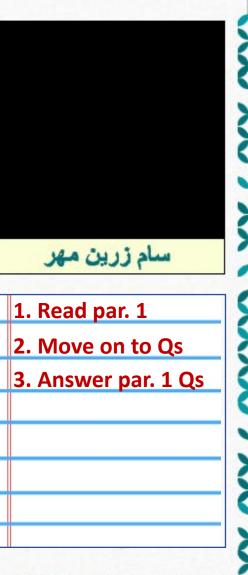
1. According to paragraph 1, which of the following must we find out in order to determine the impact of human activities upon climate?

- A)
- B)
- C)
- , ,
- D)

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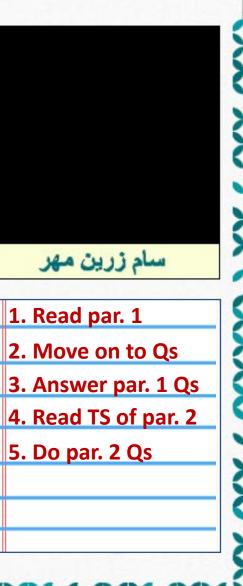
2. According to paragraph 2, an advantage of proxy records over instrumental records is that

- A)
- B)
- 0
- C)
- D)

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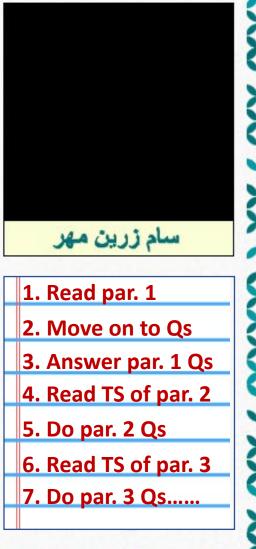
3. According to paragraph 3, scientists are able to reconstruct proxy temperature records by

- A)
- B)
- C)
- D)

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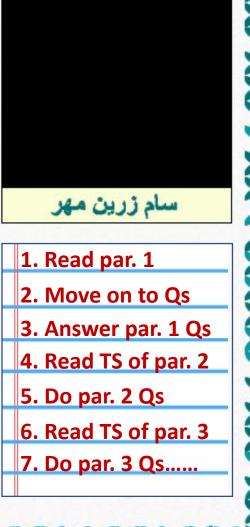
4. Which of the sentences below best expresses the essential information n the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

- A)
- B)
- C)
- D)

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A)

B)

C)

D)

5. The word "erratic" in the passage is closest in meaning to

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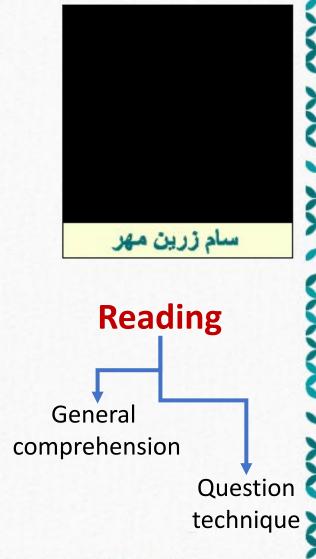
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Course syllabus What to expect?

Session No.	Content to Cover		
Session 1	Reading approaches, factual questions		
Session 2	Factual questions, Negative factual questions		
Session 3	Review, vocabulary questions, reference questions		
Session 4	Inference questions, review		
Session 5	Purpose questions		
Session 6	Sentence summary questions		
Session 7	Text insertion questions		
Session 8	Review, prose summary questions		



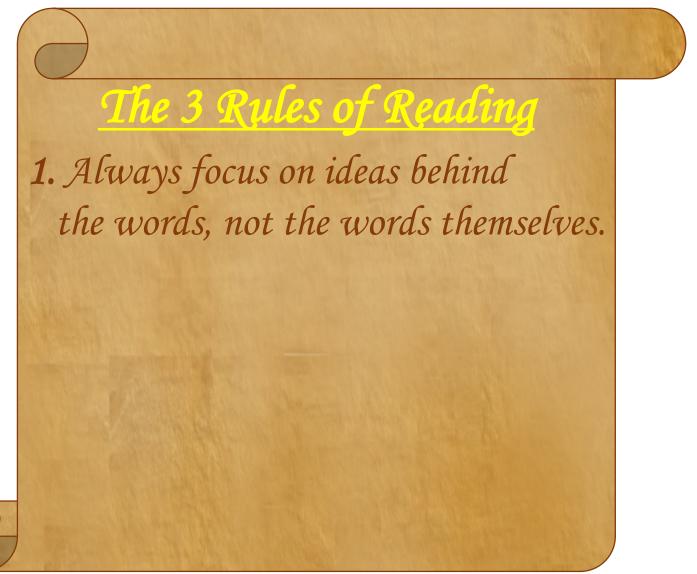
Course syllabus What to expect?

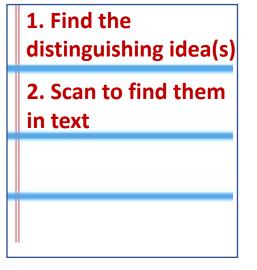
Question type	Identification	Frequency (per passage)
Factual Questions	none	3 to 4 items
Negative Factual Questions	Includes "NOT" or "EXCEPT"	0 to 1 item
Vocabulary Questions	Highlights 1 or 2 words	2 to 3 items
Reference Questions	Asks what a pronoun/relative pronoun refers to	0 to 1 item
Inference Questions	May include phrases such as "is suggested," "is implied," "can be inferred," or "can be understood"	0 to 2 item
Purpose Questions	Asks about why the author has added a sentence/idea, either directly or indirectly	1 item
Sentence Summary Questions	Highlights 2-3 sentences	1 item
Text Insertion Questions	Gives 4 squares in the text	1 item
Prose Summary Questions	Is always the last question	1 item





The Golden Rules of Reading





Factual Questions Basics

Conservation biologists have long been concerned that species extinction could have significant consequences for the stability of entire ecosystems—groups of interacting organisms and the physical environment that they inhabit. An ecosystem could survive the loss of some species, but if enough species were lost, the ecosystem would be severely degraded. In fact, it is possible that the loss of a single important species could start a cascade of extinctions that might dramatically change an entire ecosystem. A good illustration of this occurred after sea otters were eliminated from some Pacific kelp (seaweed) bed ecosystems: the kelp beds were practically obliterated too because in the absence of sea otter predation, sea urchin populations exploded and consumed most of the kelp and other macroalgae.

Q: According to paragraph 1, what was the result of the removal of Pacific sea otters?

- O The kelp and sea urchins were destroyed by new predators.
- O The uncontrolled population of sea urchins ate most of the kelp plants.
- O Without sea otters, the kelp beds soon became overgrown.
- O Macroalgae remained as the primary population in the ecosystem.

Factual Questions Delving Deeper

Assessing the impact of the army on the civilian population starts from the realization that the soldiers were always unevenly distributed across the country. Areas rapidly incorporated into the empire were not long affected by the military. Where the army remained stationed, its presence was much more influential. The imposition of a military base involved the requisition of native lands for both the fort and the territory needed to feed and exercise the soldiers' animals. The imposition of military rule also robbed local leaders of opportunities to participate in local government, so social development was stunted and the seeds of disaffection sown. This then meant that the military had to remain to suppress rebellion and organize government.

Q: What effect did military occupation have on local population?

- A) It encouraged more even distribution of the population and the settlement of previously undeveloped territory.
- B) It created a discontent and made continuing military occupation necessary.
- C) It required local labor to construct forts and feed and exercise the soldiers' animals.
- D) It provided local leaders with opportunities to participate in governance.

The Golden Rules of Reading

The 3 Rules of Reading 1. Always focus on ideas behind the words, not the words themselves. 2. When in doubt about the range of the pertinent slice, read more!

Factual Questions Delving Deeper

How did the first tetrapods make the transition to a terrestrial habitat? Like early land plants such as rhyniophytes, they made only a partial transition; they were still quite tied to water. However, many problems that faced early land plants were not applicable to the first tetrapods The ancestors of these animals already had a circulation system, and they were mobile, so that they could move to water to drink. Furthermore, they already had lungs, which rhipidistians presumably used for auxiliary breathing. The principal changes for the earliest tetrapods were in the skeletal system—changes in the bones of the fins, the vertebral column, pelvic girdle, and pectoral girdle.

Q: According to paragraph 5, what was the main way that the earliest tetrapods differed from their immediate fish ancestors?

- A. The tetrapods had a different skeletal structure.
- B. The tetrapods had more sources of food available
- C. The tetrapods had a circulation system.
- D. The tetrapods could move to new pools of water.

Factual Questions Consolidation

Evolutionary biologists believe that speciation, the formation of a new species, often begins when some kind of physical barrier arises and divides a population of a single species into separate subpopulations. Physical separation between subpopulations promotes the formation of new species because once the members of one subpopulation can no longer mate with members of another subpopulation, they cannot exchange variant genes that arise in one of the subpopulations. In the absence of gene flow between the subpopulations, genetic differences between the groups begin to accumulate. Eventually the subpopulations become so genetically distinct that they cannot interbreed even if the physical barriers between them were removed. At this point the subpopulations have evolved into distinct species. This route to speciation is known as allopatry ("allo-" means "different", and "patria" means "homeland").

Note: This is the first paragraph of TPO 31

Factual Questions Consolidation

Geographic isolation can also proceed slowly, over great spans of time. We find evidence of such extended events in the fossil record, which affords glimpse into the breakup of formerly continuous environments. For example, during past ice ages, glaciers advanced down through North America and Europe and gradually cut off parts of populations from one another. When the glaciers retreated, the separated populations of plants and animals came into contact again. Some groups that had descended from the same parent population were no longer reproductively compatible – they had evolved into separate species. In other groups, however, genetic divergences had not proceeded so far, and the descendants could still interbreed – for them, reproductive isolation was not completed, and so speciation had not occurred.

Q: According to paragraph 3, separation of subpopulations by glaciers resulted in speciation in those groups of plants and animals that

- A) Were reproductively isolated even after the glaciers disappeared
- B) Had adjusted to the old conditions caused by the glaciers
- C) Were able to survive being separated from their parent population
- D) Had experienced some genetic divergences from their parent population

General Reading Tips for better comprehension

Geographic isolation can also proceed slowly, over great spans of time. We find evidence of such extended events in the fossil record, which affords glimpse into the breakup of formerly continuous environments. For example, during past ice ages, glaciers advanced down through North America and Europe and gradually cut off parts of populations from one another. When the glaciers retreated, the separated populations of plants and animals came into contact again. Some groups that had descended from the same parent population were no longer reproductively compatible – they had evolved into separate species. In other groups, however, genetic divergences had not proceeded so far, and the descendants could still interbreed – for them, reproductive isolation was not completed, and so speciation had not occurred.

Note 1: underline _ hyphen - dash A number of species, which often lack tentacles, can be found deep in the ocean.
A number of deep-ocean species lack tentacles - a limitation that could hinder food procurement.
Note 2: Past perfect: had + p.p. (past) (past) (future)

Wrap Up What did we learn today?

- General format of the reading section in TOEFL
- Course syllabus
- Steps to solve factual questions
- 2 of the 3 Golden Rules of Reading
- Practices

See you next session! ;)